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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/537,022	03/28/2000	Mahlon D. Kimbrough	560043610129	5076

7590

07/09/2004

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EXAMINER

BELIVEAU, SCOTT E

ART UNIT

PAPER NUMBER

2614

DATE MAILED: 07/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/537,022

Applicant(s)

KIMBROUGH ET AL

Examiner

Scott Beliveau

Art Unit

2614

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 April 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16,20-31 and 44-52 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16,20-31 and 44-52 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 14.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Drawings*

1. The drawings were received on 25 August 2003. These drawings are approved.

### *Response to Arguments*

2. Applicant's arguments with respect to claim 1 have been considered but is moot in view of the new ground(s) of rejection.

### *Claim Rejections - 35 USC § 112*

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 48-51 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In particular, the specification discloses that Figure 7 illustrates a full-duplex Passive Optical Network (PON) protocol with TDMA return methodology. Accordingly, while the upstream communication is disclosed to utilize time division multiplexing based upon an assigned timeslot, the claimed "telephony/data distribution circuitry" of claim 1 does not appear to utilize TDM techniques (IA: Page 31, Line 9 – Page 32, Line 16).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
7. Claims 1-2, 6-16, 20-23, 29-31, 44, 46, 47, and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stalley et al. (US Pat No. 5,479,286) in view of Ethridge et al. (WO 99/66759).

In consideration of claim 1, the Stalley et al. reference discloses a passive fiber network which distributes voice and video to/from the central office/headend to a "plurality of home network units" [9] (Figure 2). As illustrated in Figure 2, the embodiment includes: "optical video distribution circuitry" [5/1] for combining the aforementioned "analog television signals" which is known in the art to occupy a "first bandwidth" (ex. 60 to 70 MHz) and "digital television signals" which "occupy a second bandwidth that is at a higher frequency

Art Unit: 2614

than the first bandwidth” (ex. 950 to 2050 MHz) and distribute them at a “first wavelength” of 1550 nm (Col 3, Lines 13-28; Col 5, Lines 5-11), “telephony distribution circuitry” [6], “optical multiplexing circuitry” [5] for merging the aforementioned signals at a “second wavelength” of 1550 nm (the claim does not require that the first and second wavelengths necessary be different), a “passive optical network” [3’], and a “plurality of home network units” [9] for converting the “downstream multiplexed optical signals” into “television signals” [12] (Col 4, Lines 59-64; Col 5, Lines 5-11) and “telephone signals” [15].

As to the recited limitation such that “packet data signals” comprise a “common format” with an associated “unique address” are further distributed over the network, the Stalley et al. reference suggests the distribution of interactive services, but does not explicitly disclose the particular use of uniquely addressed packetized data (Col 4, Lines 5-10). Ethridge et al. discloses a fiber access network for transporting voice and data signals in the local loop between a central office location and a plurality of remote local users. The reference teaches that “merged optical telephony/data packet signals” comprise a “common format” such as Ethernet which “includes an address identifier that uniquely associates the telephony or data packet signals with a particular subscriber” wherein each “home network unit is associated with an address identifier for a particular subscriber so that the home network unit can determine which of the transported telephony and data packet signals are directed to the particular subscriber” (Page 6, Lines 13-23; Page 9, Line 12 – Page 10, Line 8; Page 17, Lines 3-11). Accordingly, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Stalley et al. system to further utilize the packetization and routing/addressing teachings pertaining to distribution of telephony/data of Ethridge et

Art Unit: 2614

al. for the purpose of providing a means for optimizing the transport of both voice and data signals in conjunction with an optical distribution network (Ethridge et al.: Page 4, Lines 1-16)

Claim 2 is rejected wherein the Stalley et al. reference comprises an “optical multiplexer” [5] that is operable to combine the “analog television signals and the digital television signals” (Col 3, Lines 13-35; Col 5, Lines 5-11). The embodiment further comprises a “first optical stage” (Col 3, Lines 3-6).

Claim 6 is rejected wherein the Stalley et al. reference discloses that the aforementioned “first wavelength is approximately 1550 nanometers” (Col 4, Lines 40-42).

In consideration of claim 7, the Stalley et al. reference does not explicitly disclose bandwidth utilized by the “analog television signals”. It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the claimed bandwidth since it was known in the art, as supported by applicant’s admission of fact, that analog television signals such as those associated with broadcast television occupy a bandwidth of “approximately 60 to 750 megahertz”. Accordingly, it would have been obvious to one of ordinary skill in the art that the aforementioned embodiment would expect to utilize such a bandwidth for the purpose of enabling the distribution of analog television signals (Stalley et al.: Col 5, Lines 5-11).

Claim 8 is rejected wherein the reference discloses that the satellite or “digital television signals occupy a bandwidth of approximately 950 to 2050 megahertz” (Stalley et al.: Col 4, Lines 54-55).

Claim 9 is rejected wherein Figure 2 of the Etheridge et al. reference discloses a “telephony interface platform” [24], a “data switch” [28], and a “plurality of optical interface units” [34/38] for “converting the telephony signals into telephony packet signals, for multiplexing and demultiplexing the telephony packet signals with the data packet signals, and for converting the telephony and data packet signals to and from the merged optical telephony/data packet signals at the second wavelength” (Etheridge et al.: Figure 5; Page 16, Line 16 – Page 17, Line 2; Page 19, Line 15 – 19; Page 21, Line 5 – Page 22, Line 15)

Claim 10 is rejected wherein the Stalley et al. reference further comprises a “element management system” [8] which is coupled to the “telephony interface platform” [6].

Claim 11 is rejected wherein the “digital telephone switch” [20] is coupled to the “telephone interface platform” [24] via a “plurality of DS-1 telephony signals” as illustrated in Figure 2 of Etheridge et al.

Claims 12 and 13 are rejected wherein the “data switch” [28] is an “Ethernet switch” which is coupled to a plurality of “optical interface units” [34/38] via “100 Base T connections” [30/32] as illustrated in Figure 2 (Etheridge et al.: Page 17, Line 12 – Page 18, Line 3).

Claim 14 is rejected wherein “each optical interface unit is coupled to four or more transport fibers” (Etheridge et al.: Page 16, Lines 1-7).

In consideration of claim 16, the Etheridge et al. reference does not explicitly disclose the use of the Point-to-Point Protocol over Ethernet service gateway in conjunction with the while 10-Base-T Ethernet connectivity. The use of such is commonly known in the art (as defined by RFC 2516). Accordingly, it would have been obvious to one of ordinary skill in

Art Unit: 2614

the art at the time of the invention to modify the Ethridge et al. reference to further utilize a “PPPOE service gateway” for the purpose of supporting the concept of a “session” over the Ethernet similar to traditional cable modems so as to enable the service provider with the capability to charge customers based on connection time thus discouraging permanent connections and over-subscriptions to a service provider’s IP address pool.

Claim 20 is rejected wherein the “telephony packet signals and the data packet signals are formatted as Ethernet packet signals” (Ethridge et al.: Col 6, Lines 13-23).

Claim 21 is rejected wherein it would have been obvious to one of ordinary skill in the art at the time of the invention to further “identify whether a particular packet” belongs to a “packetized telephony signal or a packetized data signal” for the purpose of ensuring that the “packetized telephony signal” is given a higher routing priority given that subscribers are more sensitive to poor voice service/quality.

Claims 22 and 23 are rejected wherein the Ethridge et al. reference discloses that the “address identifier” is an “Ethernet MAC address” for the routing of information signals as is known in the art (Page 10, Lines 9-22; Page 14, Lines 10-13; Page 17, Lines 3-11).

Claim 29 is rejected the “home network units” of Stalley et al. comprise connections for servicing televisions [12] and telephones [15]. The Etheridge et al. reference discloses that the “home network unit” [17] may further comprise a connection to a “computer” or any other communication device (Ethridge et al.: Page 11, Lines 9-20; Page 17, Line 12-16).

Claims 30 and 31 are rejected wherein the aforementioned connection to the “computer” is an Ethernet 10Base-T connection as illustrated in Figure 2 (Ethridge et al.: Page 17, Lines 12-16).



Claim 44 is rejected in light of the combined teachings wherein the “home network units” [9] comprise “circuitry for transmitting merged optical telephony/data packet signals” [11] over the “passive optical network” [4] at the “second wavelength” or 1310 nm.

Claims 46 and 47 are rejected wherein the both the “home network units and the telephony/data distribution circuitry each prioritize the transmission of pending telephony packet signals over pending data packet signals in order to reduce the latency of telephony packet signal transport over the passive optical network”. Such a method may further utilize “circuitry that pauses the transmission of a pending data packet signal if a telephony packet signal is ready for transmission at the home network unit” (Ethridge et al.: Page 18, Line 4 – Page 20, Line 2).

In consideration of claim 52, Ethridge et al. discloses that “at least one of the home network units is coupled to a subscriber data network having a plurality of addressable computing devices wherein the home network unit includes circuitry for detecting the network addresses of the subscriber’s computing devices and for formatting received data packet signals according to the detected network addresses in order to properly route the received data packet signals to the appropriate computing device on the subscriber’s data network” (Page 17, Lines 3-16).

8. Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stalley et al. (US Pat No. 5,479,286), in view of Ethridge et al. (WO 99/66759), and in further view of Ortel (US Pat No. 5,861,966).

In consideration of claim 3, the Stalley et al. reference as aforementioned discloses the use of a passive optical network that comprises fiber amplifiers for downstream amplification

(Col 3, Lines 4-8) and further connects a plurality of subscribers via individual fibers (Col 2, Lines 65-67). Accordingly, the reference implies the use of a “splitter” and associated “optical booster stages” comprising fiber amplifiers. Assuming arguendo, regarding the details of the overall network involving “splitters” and “optical booster stages”, the examiner relies on the representative architecture disclosed in the Ortel reference. As illustrated in Figure 4, the reference illustrates the use of “optical booster stages” [429] that are coupled to the “output of the splitter” as described in conjunction with Figure 3 (Col 5, Lines 21-36). Accordingly, it would have been obvious to one of ordinary skill in the art to utilize “splitters” and “optical booster stages” as shown in Ortel in conjunction with the Stalley et al. PON since it is inherent to the operation of optical systems that the introduction of splitters in the network introduces losses in the output signals. Accordingly, it would have been obvious to one of ordinary skill in the art at the time of the invention to recognize the need to further introduce “optical booster stages” to counteract the losses associated with the splitters for the purpose of ensuring that the downstream subscribers receive the proper signal strength.

Claim 4 and 5 are rejected wherein the Ortel et al. reference discloses the use of “Erbium-doped fiber” amplifiers (Col 5, Lines 21-32).

9. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stalley et al. (US Pat No. 5,479,286), in view of Ethridge (WO 99/66759), and in further view of Foltzer (US Pat No. 5,969,836).

In consideration of claim 15, the Stalley et al. embodiment does not utilize a combined “first” and “second wavelength” in the up-stream direction as required by the claim wherein the “second wavelength” is 1310 nm. Rather, the reference discloses that combined video

and telephony are transmitted in the upstream direction at 1550 nm and transmitted in downstream direction at a frequency of 1300 nm (Col 4, Lines 38-42). It would have been an obvious matter of design choice to utilize "1310 nm" as the "second wavelength", since applicant has not disclosed that particular selection of a "second wavelength" particularly utilizing "1310 nm" as opposed to the disclosed 1550 nm of Stalley et al. solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with either.

Alternatively, the Foltzer reference provides evidence as to the advantageous usage of the "first" and "second wavelength" over the particular wavelength transmission means of Stalley et al. wherein a single wavelength is utilized in each direction, which is characterized as being an inefficient use of signal distribution over a single fiber. The reference discloses that "conventional systems" as illustrated in Figure 2 utilize an optical communication system for the distribution of both telephony and video signals using "optical multiplexer to combine and transmit a combined "first wavelength" video signal with a "second wavelength" telephony/data signal of "1310 nm" (Col 2, Lines 14-16, 50-55). Such a system is described as an improvement over the method of Figure 1, however, the reference does not explicitly teach away from the use of such a system in that the "conventional" is characterized as a valid method for the transmitting of both upstream and downstream telephony that is an improvement over Figure 1 (Col 1, Lines 59-67 – Col 2, Lines 1-13) and furthermore is disclosed to provide an advantage in that conventional couplers may be utilized (Col 4, Lines 5-13). Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made so as to modify Stalley et al. so as to utilize

Art Unit: 2614

different “first” and “second wavelengths” wherein the “second wavelength” is “1310 nm” for the purpose of advantageously utilizing three transmission bands to handle the required three transmission channels using conventional couplers (Foltzer: Col 2, Lines 3-13; Col 4, Lines 5-13).

10. Claims 24-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stalley et al. (US Pat No. 5,479,286), in view of Ethridge et al. (WO 99/66759), and in further view of Mahony (US Pat No. 6,427,035).

In consideration of claim 24, the aforementioned Stalley et al. reference discloses a passive optical distribution network [3'] that comprises a plurality of fibers connected to a “home network unit” [9]. The reference however, does not provide sufficient details as to the connectivity of the network to the subscriber. The Mahony et al. reference discloses a fiber optic deployment for a FTTH implementation. In particular, the network comprises a “plurality of transport fibers” [102a/106a] (Col 8, Lines 22-30), a “plurality of drop fibers” [110], and a “plurality of passive optical splitters” [104] that are coupled between the “transport fibers and the drop fibers” as illustrated in Figure 1a. Accordingly, it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the illustrative Mahony et al. fiber optic deployment in conjunction with the aforementioned combined references for the purpose of providing a fiber distribution architecture that provides continuous uninterrupted fiber optic service from a service provider central office to the subscriber premises (Mahony: Col 2, Lines 17-22).

Claim 25 is rejected wherein the aforementioned “optical splitters” [104] are at least “4 to 1 splitters” (Col 8, Lines 32-41).

In consideration of claim 26, the Mahony et al. reference does not explicitly disclose the length of the “transport fibers” [102a/106a]. It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize a “length of the transport fibers” to be less than “approximately 33,000 feet” since it was known in the art, as further supported by applicant’s admission of fact, to do such for the purpose of negating the effects of signal loss or propagation errors developed within the transport fiber.

In consideration of claim 27, the Mahony et al. reference does not explicitly disclose the length of the “plurality of drop fibers” [110]. It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize a “length of the drop fibers” to be less than “approximately 3,300 feet” since it was known in the art to utilize such, as further supported by applicant’s admission of fact, for the purpose enabling the upstream “home network unit” transmitter to use lower power optical transmitters thus reducing the cost of each unit.

In consideration of claim 28, the Mahony et al. reference discloses that the “transport fibers” [106] may be spliced to the “splitter” [104] (Col 8, Lines 29-41). However, the reference does not particularly disclose the particular method of splicing utilized. The particular technique of “fusion splicing” is commonly known in the art (ex. Foltzer: Col 2, Lines 47-50). Accordingly, it would have been obvious to one having ordinary skill in the art so as to “fusion splice” the splitters to the transport fibers for the purpose of minimizing coupling losses.

Art Unit: 2614

11. Claim 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stalley et al. (US Pat No. 5,479,286), in view of Ethridge et al. (WO 99/66759), and in further view of Fisher et al. (DE 4328484).

The aforementioned combined references, do not explicitly disclose nor preclude the usage of "echo cancellation circuits" in conjunction with the "home network units". The Fisher et al. reference discloses the use of a "echo cancellation" circuit in conjunction with a broadband ISDN passive system that is operable to "monitor echo signals" associated with the "second wavelength" or upstream frequency and to subsequently "inject an echo cancellation signal" (Abstract). Accordingly, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify the "home network unit" or subscriber terminal so as to include an "echo cancellation circuit" for the purpose of advantageously reducing upstream noise associated with upstream signaling subsequently reducing data transmission errors and improving the quality of upstream voice communications.

12. Claim 48 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stalley et al. (US Pat No. 5,479,286) in view of Ethridge et al. (WO 99/66759), and in further view of Masucci et al. (US Pat No. 6,498,667).

In consideration of claim 48, the Stalley et al. reference discloses that the "telephony/data distribution circuitry time division multiplexes" upstream communications from the subscribers to the central office (Stalley et al.: Col 3, Lines 42-59). The Ethridge et al. reference does not particularly disclose that the "telephony/data distribution circuitry" [34] necessarily utilizes "time division multiplexing" techniques, however, it explicitly suggests

the particular usage of ATM switching in conjunction with its teachings (Page 13, Lines 13-21). Figure 1 of the Masucci et al. reference illustrates the particular usage of bi-directional “time division multiplexing” in a passive optical network that distributes merged voice, high speed data, and video (Col 1, Lines 34-38; Col 3, Line 29 – 41). Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made so as to modify the combined teachings so as to utilize “time division multiplexing” in conjunction with the “telephony/data distribution circuitry” for the purpose of providing both-packet-based and cell-based services over a low cost high bandwidth network access (Masucci et al.: Col 1, Lines 31-33) using a commonly known encoding scheme that increases channel transmission efficiency. The further usage of TMDA in conjunction with the combined teachings further provides a means to avoid issues related to packet collisions associated with multi-terminal communications over a single channel.

13. Claims 49-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stalley et al. (US Pat No. 5,479,286), in view of Ethridge et al. (WO 99/66759), in view of Masucci et al. (US Pat No. 6,498,667), and in further view of Mahony (US Pat No. 6,427,035).

In consideration of claim 49, the aforementioned Stalley et al. reference discloses a passive optical distribution network [3'] that comprises a plurality of fibers connected to a “home network unit” [9]. The reference however, does not provide sufficient details as to the connectivity of the network to the subscriber. The Mahony et al. reference discloses a fiber optic deployment for a FTTH implementation. In particular, the network comprises a “plurality of distribution fibers” [102a/106a] (Col 8, Lines 22-30) wherein “each home network unit of the plurality of home network units is coupled to the one distribution fiber

Art Unit: 2614

via a drop fiber” [110] as illustrated in Figure 1a. Accordingly, it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the illustrative Mahony et al. fiber optic deployment in conjunction with the aforementioned combined references for the purpose of providing a fiber distribution architecture that provides continuous uninterrupted fiber optic service from a service provider central office to the subscriber premises (Mahony: Col 2, Lines 17-22).

Claims 50 and 51 are rejected wherein “each of the plurality of home network units transmit merged optical telephony/data packet signals . . . via a defined upstream time slot assigned to each of the plurality of home units” using “circuitry for detecting and selecting a particular upstream time slot for communicating back to the central office” (Masucci et al.: Col 4, Line 30 – Col 5, Line 28; Col 6, Lines 24-62).

### *Conclusion*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure as follows. Applicant is reminded that in amending in response to a rejection of claims, the patentable novelty must be clearly shown in view of the state of the art disclosed by the references cited and the objections made.

- The Combs et al. (US Pat No. 6,751,417) reference discloses an optical fiber architecture that distributes video, and telephony/data in a manner that utilizes both WDM and addressing techniques.



Art Unit: 2614

- The Aranguren et al. (US Pat No. 5,553,071) reference discloses the usage of TDM in conjunction with the distribution of data, voice, and/or video via an Ethernet hub to a plurality of workstations.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Beliveau whose telephone number is 703-305-4907.

The examiner can normally be reached on Monday-Friday from 9:00 a.m. - 6:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John W. Miller can be reached on 703-305-4795. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SEB  
June 24, 2004

  
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